Mirant Potomac River, LLC
1400 North Royal Street
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BY ELECTRONIC AND U.S. MAIL

Mr. Terry Darton
thdarton@deq.virginia.gov
Air Permit Manager
DEQ Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

Re: Comments on Draft State Operating Permit
for the Mirant Potomac River Generating Station

Dear Mr. Darton:

Mirant Potomac River, LLC ("Mirant") appreciates the opportunity to provide these supplemental comments on the draft two-stack state operating permit ("Draft Permit") published by the Department of Environmental Quality ("DEQ") on December 21, 2007 for Mirant's Potomac River Generating Station ("PRGS" or "Plant"). These comments support the modeling data for the alternate sorbent, which was provided to DEQ on January 29, 2008. Mirant also responds to some of the comments filed by the City of Alexandria on January 25, 2008 and January 29, 2008.

I. Alternate Sorbent

Contrary to the City's comments, the Draft Permit does not preapprove the use of any alternate sorbent. Rather, it provides a mechanism for such approval to be sought. Mirant is seeking approval for the use of sodium bicarbonate ("SBC") as an alternate sorbent material, but it is doing so through a separate process. The TRC report dated January 29, 2008 demonstrates that (1) using SBC will allow Mirant to achieve the low SO2 emissions rates required under the Draft Permit more reliably and (2) there are no adverse effects from its use. Mirant will be submitting a separate request seeking approval of use of SBC as an alternate sorbent.

II. Response to Comments Filed by the City of Alexandria

As Mirant has noted in previously filed comments, the City of Alexandria's primary objective is to remove the Plant from its water front, making room for development that is "more compatible" with its long term plans for the area. This obviously is a land use issue unrelated to air quality. Accordingly, Alexandria's comments are not aimed at improving Mirant's operations nor air quality in the surrounding area, but rather at seeking to have the Air Board impose the most stringent, costly requirements in the hopes that Mirant would elect to cease operation. As a result of its focus on closing the Plant, the information Alexandria has provided on the environmental issues at hand is outdated, irrelevant, and fundamentally, technically flawed.

A. DOE Report is No Longer Relevant and is Overly Conservative

1. SEA was based on the short term extension of the previously expired DOE Order and is not germane to Draft Permit.

The Special Environmental Analysis ("SEA") prepared by the Department of Energy evaluated the impacts of the Administrative Consent Order ("ACO") issued on December 20, 2005. The SEA predicted the impacts through December 2007, and assumed that the requirements in the ACO were applicable throughout that time. The ACO, however, was terminated on June 1, 2007 at which time the Plant became subject to a state operating permit issued by the State Air Pollution Control Board. The permit includes very different provisions from the ACO, including stringent short and long term limitations and the removal of the predictive modeling concept. Thus, the SEA is no longer relevant and does not accurately predict the impacts of the Plant operations under its current permit or the two state operating permits currently under consideration.

The proposed Draft Permit protects the NAAQS and will reduce the impact of the Plant's emissions in the local area. The requirements are significantly more stringent than the requirements reviewed as part of the SEA. Alexandria's continued reliance on the SEA as a basis for opposing the Draft Permit is inappropriate and is a desperate attempt to obfuscate the data.

2. Assumptions regarding PM2.5 emissions and operations are wrong.

As discussed in the attached ENVIRON report, it appears that the modeling conducted in the SEA was not correct and accordingly produced biased data. The SEA appears to model PM2.5 emission rates that are higher than actual emission rates (based on stack test results). Use of the measured emissions rates would have produced impacts 11 percent lower than DOE predicted in the SEA.

Also, DOE may not have used the correct base case nor the correct methodology in reaching its conclusions. In developing the baseline, DOE neglected to account for the Plant's existing contribution. As a result of the bias inherent in the analysis, DOE's predictions of impacts are not trivial and results in concentrations significantly above the NAAQS -- contrary to

actual monitoring data which is available today. Similarly, DOE used the default AERMOD building dimensions in its analysis,[1] which significantly overstate impacts.

Even with these errors, the SEA analysis indicates health risks from Plant emissions were lower when the Plant was operated in accordance with the Order than when the Plant was operating in early 2005. As the proposed permit imposes even more stringent operational restrictions and includes the stack merge project, the emissions will pose even less of a health risk.

B. Earth Tech Report is Fundamentally Flawed for Many Reasons

1. The report used the wrong baseline/worst case scenario.

As noted in the attached ENVIRON report, EarthTech used the wrong baseline in its analysis, thus skewing the results and presenting a flawed conclusion. PRGS is a currently operating facility, whose emissions are already included in the ambient PM2.5 concentrations measured in the area. The Earth Tech analysis calculates the impact of the Draft Permit as if the emissions that occur after the permit is issued are all new emissions (which might be appropriate for a new facility). In fact, the Draft Permit is more stringent that current operating conditions, and will result in lower emissions and better dispersion conditions. Accordingly, if the appropriate baseline was used, the modeling would show a benefit to local air quality from operation of the Plant under the Draft Permit. This error alone is sufficient reason to disregard Earth Tech's attempt to model the effects of the Draft Permit.

2. The modeling data used by Earth Tech were flawed.

As discussed in greater detail in the attached ENVIRON report, there were significant errors in the application of modeling by EarthTech. Thus, the conclusions of their report are flawed and not valid. A proper application of the model would have demonstrated air quality benefits resulting from the operation of the Plant under the proposed permit.

3. Improper use of BENMAP.

As noted in the ENVIRON report, BenMAP was created by EPA to predict the benefits derived from potential improvements in air quality that would flow from new regulations. It is typically applied on a broad basis. It has never been used to analyze the air quality impacts of one facility, especially in such an urban setting where multiple sources of air pollution are present. EarthTech's application of BenMAP in this way is highly irregular and technically flawed.

It should be noted that BenMAP estimates the economic benefit from air quality improvements between two different operating scenarios. When the software package is used as

[1]A wind tunnel study was conducted to physically model the building structures surrounding PRGS. This physical model was used to develop appropriate building dimensions for use in the AERMOD model.

it was by Earth Tech, BenMap will produce an economic benefit resulting from any improvement in air quality between the two scenarios, regardless of whether both scenarios are below the National Ambient Air Quality Standard (NAAQS). Since the NAAQS are set to protect human health (Clean Air Action § 109, 42 U.S.C. § 7409), no regulatorily unacceptable health risks are associated with a PM2.5 level below the NAAQS, and it is not appropriate in the permitting framework to calculate an economic benefit for a further decrease in PM2.5 levels when the NAAQS is already met. The base scenario used by Earth Tech includes current ambient PM2.5 data, showing that the PM2.5 concentrations in the Alexandria area are below the NAAQS. If Earth Tech had conducted its modeling properly, their control scenario (to be compared to the base scenario) would also have been below the NAAQS. Therefore, there is no rationale for use of BenMAP.

4. Monitoring data show modeling was in error.

The monitoring data has demonstrated that PM2.5 levels in the area of the Plant, when the Plant is running, comply with the NAAQS for PM2.5. Accordingly, as noted in the attached ENVIRON report, there is no evidence of unacceptable health risks in Alexandria due to PM2.5. There is no basis for including a limit for PM2.5 in a state operating permit for the Plant yet, as no guidance has been issued by EPA on how to appropriately model for PM2.5.

5. Inordinate attention to impact on Marina Towers.

The City of Alexandria and EarthTech have focused primarily on the impact of the emissions from the Plant on residents of Marina Towers. It is improper to focus the analysis of impact so narrowly. Marina Towers is located in an urban area with many different sources of pollution. Indeed, the data indicate that regional levels of PM2.5 do not vary materially from one location to another over a very large area but they do vary considerably temporally. *See, e.g.,* the attached ENVIRON report. Nonetheless, emissions from the planes landing and taking off from Reagan National Airport alone contribute significant PM2.5 emissions to the area, as do emissions from cars and trucks. *See, e.g.,* "Evaluating Particulate Emissions from Jet Engines: Analysis of Chemical and Physical Characteristics and Potential Impacts on Coastal Environments and Human Health," Transportation Research Record, copy attached; 68 Fed. Reg. 56226, 56234-56236 (Sept. 30, 2003), "Control of Air Pollution from Aircraft and Aircraft Engines; Emission Standards and Test Procedures," copy attached.

The proposed permit includes a project that will reduce the impact of the Plant on Marina Towers. Accordingly, if the City's concerns about the impact of the Plant on Marina Towers were genuine, they should support the stack merge project and the proposed permit.

6. Conclusion

The cumulative effect of these errors piled on top of errors is that the Earth Tech letter should be given no credence.

C. The City's Assumptions About PM Emissions from the Plant are Wrong.

As illustrated by the attached memorandum from Dr. Laura Green with Cambridge Environmental, Inc., many of the City's assumptions about PM emissions from the Plant are wrong. The Plant is equipped with serial electrostatic precipitators ("ESPs") - one on the "hot side" and one on the "cold side." The serial ESPs ensure excellent control of PM emissions. Moreover, the testing and analysis performed by Cambridge Environmental demonstrate that non-respirable (larger than 10 micron) particles dominate the emissions from the Plant and PM2.5 emissions are actually quite small (less than 0.001 lb/MMBtu). As Ms. Green concludes in her report, the stack test data, opacity data and ambient air monitoring data all demonstrate that the City's concerns with regard to particulate matter emissions from the Plant are unfounded.

D. Virginia is Appropriately Addressing PM2.5

As has been noted by DEQ throughout the permitting process, it is premature to address PM2.5 as part of a state operating permit for the Plant. In the short term, Virginia has adopted a policy of using PM10 emissions as a surrogate for PM2.5 emissions for purposes of New Source Review. Longer term, Virginia has established a working group to determine how fine particles should be addressed as part of its plan to attain compliance with the PM2.5 ambient standard. Virginia must submit a plan identifying its proposed approach in April. As part of this process, Virginia must identify and evaluate sources of direct PM2.5 and precursors (SO2 and NOx), but has discretion as to what mix of controls to use. *See* Clean Air Fine Particulate Implementation Rule, 72 Fed. Reg. 20585 (April 25, 2007). Moreover, states are not required to consider the condensible fraction of PM2.5 for any submissions prior to January 2011. Virginia could decide that the best way to control PM2.5 from power plants is entirely through regulation of precursors. This would be consistent with EPA's Clean Air Interstate Rule, which focuses on SO2 and NOx to control PM2.5. There are also concerns about the availability of accurate methods to measure or monitor for PM2.5.

For all of these reasons, it is premature to include any provisions relating to PM2.5 in the state operating permit for the Plant. Virginia is appropriately working to address PM2.5 emissions through the process established by EPA.

E. NSR Does Not Apply

DEQ has devoted significant resources to studying the various pollution control projects and the stack merge project described in this permit. All of the projects implemented to date at the Plant have resulted in reduced emissions and thus have not triggered NSR. The same is true for the stack merge project.

The stack merge project will lead to emission reductions or at the very least will not cause a significant emissions increase. DEQ has reached the same conclusion. *See, e.g.*, Memorandum from Michael Dowd to David Paylor dated June 26, 2007; Email from David Paylor to Michael Dowd dated June 6, 2007 (including email from James Sydnor to Judith Katz).

DEQ has also concluded that NSR does not apply because that the annual limitation on SO2 emissions included in the permit issued on June 1, 2007 and proposed in the Draft Permit limits emissions to levels below the applicable baseline. Accordingly, the emissions from the Plant will not increase as a result of the project and NSR is not triggered. Although Mirant does not believe that a permit of any kind is necessary for the stack merge project to take place, DEQ's analysis demonstrates that the City's arguments relating to NSR requirements are specious.

The City's continued arguments relating to NSR are not based on the law or the facts. NSR is not triggered by any of the pollution control projects - past or future - proffered by Mirant as a means of addressing its impact in the local area.

F. No Benefit from Installation of Baghouse.

As noted in the Sargent & Lundy report dated January 29, 2008, the current PM emission rates measured by the Plant are similar to the guarantee levels for baghouses, with very little improvement possible. The cost for purchasing and installing such baghouses would exceed $75 million. This equates to a cost of approximately $1,000,000/ton of PM removed. The costs far exceed the minimal benefit. The City has not offered any information that contradicts this conclusion.

G. No Health Effects from Use of Trona

The City of Alexandria continues to foster unnecessary fear about the health effects of the use of trona as a sorbent. On May 21, 2007, Mirant submitted to DEQ a letter from Solvay Chemical noting that trona has been used for SO2 removal for almost 20 years. There is no evidence of any adverse health effects associated with such use. In a July 7, 1995 Federal Register Notice, EPA exempted trona from TSCA's premanufacture notification requirements because EPA believed it poses little or no risk to human health. 60 Fed. Reg. 35396 (July 7, 1995).

The Food and Drug Administration has also recognized that trona is a generally safe ingredient, approving it for direct addition to human food, without limitation on level of use, other than good manufacturing practice for use as a pH control agent and to control lactic acid in cream. 21 C.F.R. 184.1792. It is also listed in FDA regulations for use in animal feed with no technical effect specified and no limitations on level of use other than good manufacturing and good feeding practices. 21 C.F.R. 582.1792. As part of the approval process, the FDA conducted a literature review and safety assessment that concluded that there were no health effects resulting from trona. 43 Fed. Reg. 25438 (June 13, 1978).

Thank you again for the opportunity to provide these comments. If you have any questions, please call me at 202-585-3812.

Sincerely,

Walter L. Stone

Attachments

ATTACHMENTS TO MIRANT'S SUPPLEMENTAL COMMENTS
FEBRUARY 15, 2008

1. ENVIRON Letter to David Cramer (to be finalized)

2. Laura Green Memorandum

3. ENSR Critique of Earth Tech Report (to be finalized - Cramer coordinating)

4. "Evaluating Particulate Emissions from Jet Engines: Analysis of Chemical and Physical Characteristics and Potential Impacts on Coastal Environments and Human Health," Transportation Research Record

5. "Control of Air Pollution from Aircraft and Aircraft Engines; Emission Standards and Test Procedures," 68 Fed. Reg. 56226, 56234-56236 (Sept. 30, 2003)

6. June 26, 2007 memo from Mike Dowd to Dave Paylor re: NSR Not Triggered by Stack Merge

7. Email from David Paylor to Michael Dowd dated June 6, 2007 (including email from James Sydnor to Judith Katz).

8. Sargent & Lundy report (January 29, 2008)

9. Exemption of Trona from TSCA Premanufacture Notification Requirements, 60 Fed. Reg. 35396

10. FDA regulations regarding trona, 21 CFR 184.1792

11. FDA regulations regarding trona, 21 CFR 582.1792

12. FDA safety assessment for trona, 43 Fed. Reg. 25438